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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/598,665

09/07/2006

Jan Bertus Marten Warntjes

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS  
595 MINER ROAD  
CLEVELAND, OH 44143

EXAMINER

FETZNER, TIFFANY A

ART UNIT

PAPER NUMBER

2831

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/598,665

**Applicant(s)**WARNTJES, JAN BERTUS  
MARTEN**Examiner**

Tiffany A. Fetzner

**Art Unit**

2831

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED 2<sup>nd</sup> Non-final ACTION**

***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Information Disclosure Statement***

2. The information disclosure statement(s) (IDS)'s submitted on **9/7/2006** is in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner has considered the information disclosure statements. The initialed and dated information disclosure statement(s) (IDS)'s submitted on **9/7/2006** was previously attached to the Office action of October 9<sup>th</sup> 2007.

***Response to Arguments***

3. Applicant's arguments with respect to claims 1-11 from the January 3<sup>rd</sup> 2008 amendment and response have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. **Claims 1-18** are rejected under 35 U.S.C. 102(e) as being anticipated by **Kellerman et al.**, US patent 7,154,268 B2 issued Dec, 26<sup>th</sup> 2006, with an effective US priority date of **October 19th 2001**.
6. With respect to **Claim 1, Kellerman et al.**, teaches and shows "A method for generating magnetic resonance images using a magnetic resonance apparatus [See figures 1-5, abstract] :the method comprising the steps: acquiring a reference scan," [See col. 5 lines 41-47] ] "providing the magnetic resonance apparatus with a target

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value of a specific scan parameter: [See col. 5 line 41 through col. 10 line 31] and determining, by the magnetic resonance apparatus and based on reference scan data, an optimum scan parameter set according to the target value of the specific scan parameter." [See col. 7 line 11 through col. 10 line 31 as one example of this teaching.]

7. With respect to **Claim 2, Kellerman et al.**, teaches "the reference scan data include sensitivity data for each coil element of the magnetic resonance apparatus for each voxel. [See col. 4 line 41 through col. 10 line 31 where values for pixels and/or voxels are determined.] The same reasons for rejection, which apply to **claim 1** also apply to **claim 2** and need not be reiterated.

8. With respect to **Claim 3, Kellerman et al.**, teaches and shows "the optimum scan parameter set is determined for a defined region of interest" [See the defined FOV, of figures 1-3, col. 5 line 41 through col. 10 line 31]. The same reasons for rejection, which apply to **claim 1** also apply to **claim 3** and need not be reiterated.

9. With respect to **Claim 4, Kellerman et al.**, teaches and shows teaches the specific scan parameter" may be "the scan time" from col. 1 line 55 through col. 2 line 15.] The same reasons for rejection, which apply to **claim 1** also apply to **claim 4** and need not be reiterated.

10. With respect to **Claim 5, Kellerman et al.**, teaches the specific scan parameter" may be "the signal-to-noise ratio" because he specifically accounts for SNR [See col. 7 line 28 through col. 9 line 22]. The same reasons for rejection, which apply to **claim 1** also apply to **claim 5** and need not be reiterated.

11. With respect to **Claim 6, Kellerman et al.**, teaches "determining the image noise for a number of predetermined scan parameter sets" [See col. 7 lines 28-32]. The same reasons for rejection, which apply to **claim 1** also apply to **claim 6** and need not be reiterated.

12. With respect to **Claim 7, Kellerman et al.**, shows "different orientations of the phase encode direction." [See figures 2, 3] The same reasons for rejection, which apply to **claims 1, 6** also apply to **claim 7** and need not be reiterated.

13. With respect to **Claim 8, Kellerman et al.**, teaches "sets with different RFOV" [See col. 3 line 60 through col. 9 line 21]. The same reasons for rejection, which apply to **claims 1, 6** also apply to **claim 8** and need not be reiterated.

14. With respect to **Claim 9, Kellerman et al.**, teaches "automatically performing a scan using the determined optimum scan parameter set." [See col. 5 line 48 through col. 10 line 31.] The same reasons for rejection, which apply to **claims 1** also apply to **claim 9** and need not be reiterated.

15. With respect to **Claim 10, Kellerman et al.**, teaches and shows "An apparatus for generating magnetic resonance images" [See figure 5] comprising: an acquisition device for acquiring a reference scan, an operating device for providing the apparatus with a target value of a specific scan parameter, and a control device for determining, based on reference scan data, an optimum scan parameter set according to the target value of the specific scan parameter." [See figure 5, col. 9 line 22 through col. 10 line 31.] The same reasons for rejection, which apply to **claims 1**, also apply to **claim 10** and need not be reiterated.

16. With respect to **Claim 11, Kellerman et al.**, teaches "A computer program for generating magnetic resonance images using a magnetic resonance apparatus comprising: computer instructions to control a computer to perform the method as claimed in **claim 1**. [See figure 5 col. 9 line 22 through col. 10 line 31.] The same reasons for rejection, which apply to **claims 1**, also apply to **claim 11** and need not be reiterated.

17. With respect to **New Claim 12, Kellerman et al.**, teaches "A magnetic resonance imaging method comprising: selecting a target value of a specified scan parameter criterion, the specified scan parameter criterion being one of a signal-to-noise ratio" [See col. 7 line 1 through col. 10 line 31] and a scan time;" [See col. 1 line 56 through col. 2 line 35] "analyzing a reference scan" [See col. 5 line 39 through col. 8 line 13 and col. 2 lines 56-58, with respect to the reference scan and the analysis the reference scan provides to other variables;]" to determine which of a plurality of sets of scan parameters (I) meet the specified one of the signal-to-noise ratio scan criterion" [See

col. 7 lines 24-55 and col. 8 line 56 through col. 9 line 22] “and the scan time scan criterion” [See col. 1 line 56 through col. 2 line 35] “(2) optimize the other of the signal-to-noise ratio scan criterion and the scan time scan criterion, namely, maximize in the case of the signal-to-noise ratio or minimize in the case of the scan time.” [See col. 1 line 56 through col. 2 line 35; col. 4 line 24 through col. 10 line 31 with respect to the trade-offs of one variable to optimize another.]

18. With respect to **New Claim 13**, **Kellerman et al.**, teaches “defining a region of interest” (i.e. a field of view) and wherein the plurality of sets of scan parameters include both (1) subsets of scan parameters for performing intrinsic foldover imaging techniques in which foldover signals fall outside the region of interest,” [See col. 1 lines 38-48, col. 2 lines 56-58, See col. 3 line 42 through col. 10 line 31. The initial “foldover” discussion starts in col. 4 line 2, but the ghosting referred to in the **Kellerman et al.**, reference but this is also referred to as “ghosting” throughout the **Kellerman et al.**, reference.] “and (2) subsets of scan parameters for performing sensitivity encoding imaging techniques with a field of view that encompasses a size of a subject and contains the defined region of interest.” [See col. 1 lines 38-col. 10 line 31 as imaging the FOV is taught throughout the reference.] The same reasons for rejection, which apply to **claim 12** also apply to **claim 13** and need not be reiterated.

19. With respect to corresponding **New Claims 14**, and **15** which respectively depend from **claims 13** and **claim 12**; **Kellerman et al.**, teaches “the subsets of scan parameters include scan parameter sets that describe a plurality of different phase encoding directions. [See col. 1 line 39 through col. 2 line 35 with col. 6 line 53 through col. 9 line 15 where the phase and signal information is encoded at least in the x, and y directions.] The same reasons for rejection, which apply to **claims 12, 13** also apply to **claims 14, 15** and need not be reiterated.

20. With respect to **New Claim 16**, **Kellerman et al.**, teaches “**one of**: automatically conducting a magnetic resonance imaging scan using the determined set of scan parameters which meets the specified one of the signal-to- noise scan criterion and the scan time scan criterion and which optimizes the other one of the signal-to-noise scan

criterion, and the scan time scan criterion;” [See col. 2 line 14 through col. 10 line 31] “and, presents a display for operator selection of sets of scan parameters that meet the specified criterion and optimize the other criterion.” [See col. 7 line 24 through col. 10 line 31.] The same reasons for rejection, which apply to **claim 12**, also apply to **claim 16** and need not be reiterated.

21. With respect to **New Claim 17, Kellerman et al.**, teaches and shows from figure 5, “A magnetic resonance imaging apparatus including a computer-based controller programmed to control the magnetic resonance imaging apparatus to perform the method as claimed in **claim 12**.” [See figure 5, col. 1 lines 49-55, col. 7 line 24 through col. 10 line 31.] The same reasons for rejection, which apply to **claim 12**, also apply to **claim 16** and need not be reiterated.

22. With respect to **New Claim 18, Kellerman et al.**, teaches and shows from figure 5, “A computer medium carrying software for controlling a computer to perform the method as claimed in **claim 12**.” [See figure 5, col. 1 lines 49-55, col. 7 line 24 through col. 10 line 31.] The same reasons for rejection, which apply to **claim 12**, also apply to **claim 16** and need not be reiterated.

#### ***Prior Art of Record***

23. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

**A) Gonzalez Ballester et al.**, US patent application publication 2004/0070394 A1 published April 15th 2004, filed Jan. 18<sup>th</sup> 2002.

**B) Gonzalez Ballester et al.**, US patent 6,949,928 B2 issued Sep. 27<sup>th</sup> 2005, which corresponds to **Gonzalez Ballester et al.**, US patent application publication 2004/0070394 A1 published April 15th 2004, filed **Jan. 18<sup>th</sup> 2002**.

**C) .**

#### **Conclusion**

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tiffany Fetzner whose telephone number is: (571) 272-2241. The examiner can normally be reached on Monday, Wednesday, and Friday-Thursday from 7:00am to 2:10 pm., and on Tuesday and Thursday from 7:00am to 5:30pm.

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25. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Diego Gutierrez**, can be reached at (571) 272-2245. The **only official fax phone number** for the organization where this application or proceeding is assigned is **(571) 273-8300**.

26. Information regarding the status of an application may be obtained from the Patent Application information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PMR or Public PMR. Status information for unpublished applications is available through Private PMR only. For more information about the PMR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PMR system contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/TAF/  
April 4, 2008

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